Telephone Numbers and E9-1-1 for Video Relay Service

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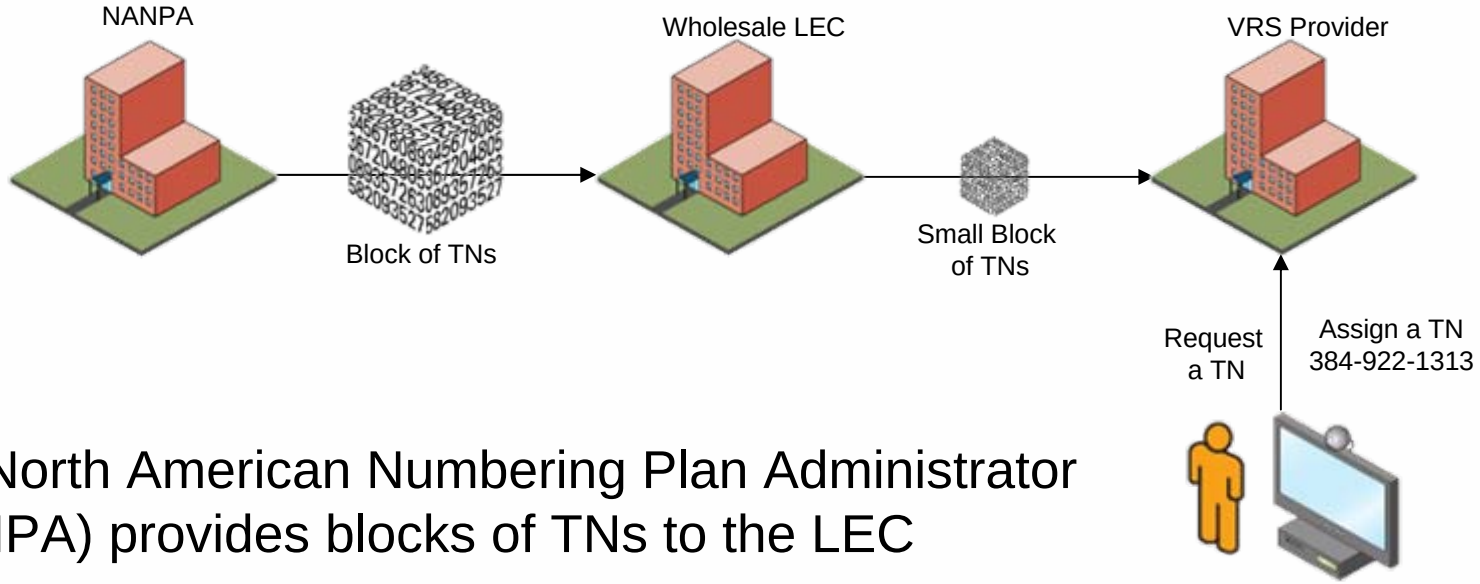
April 17, 2007

Telephone numbers and E9-1-1 for VRS

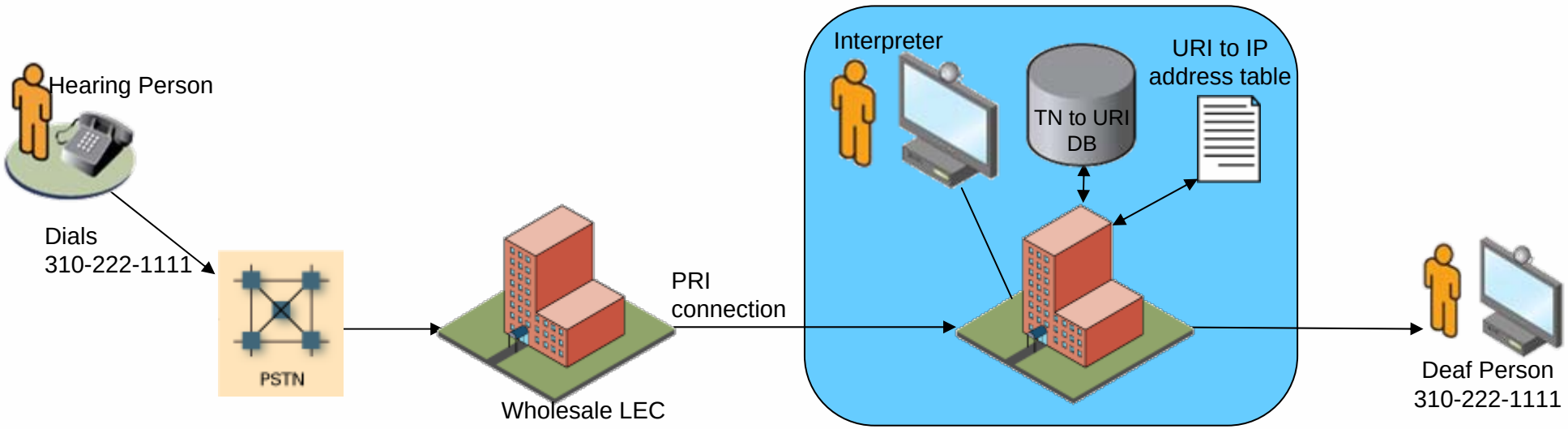
- The capabilities exist today to better integrate VRS service into the traditional telephone network
- This would provide the deaf users with REAL telephone numbers (TNs), able to be dialed by anyone
  - These TNs would be able to be ported to any VRS provider
- Hearing callers would be able to select which VRS provider they want to use to talk to the deaf user
- 911 calls from deaf VRS users would be automatically routed to the correct 911 PSAP and the PSAP would receive the caller's location

Providing TN's to deaf VRS users



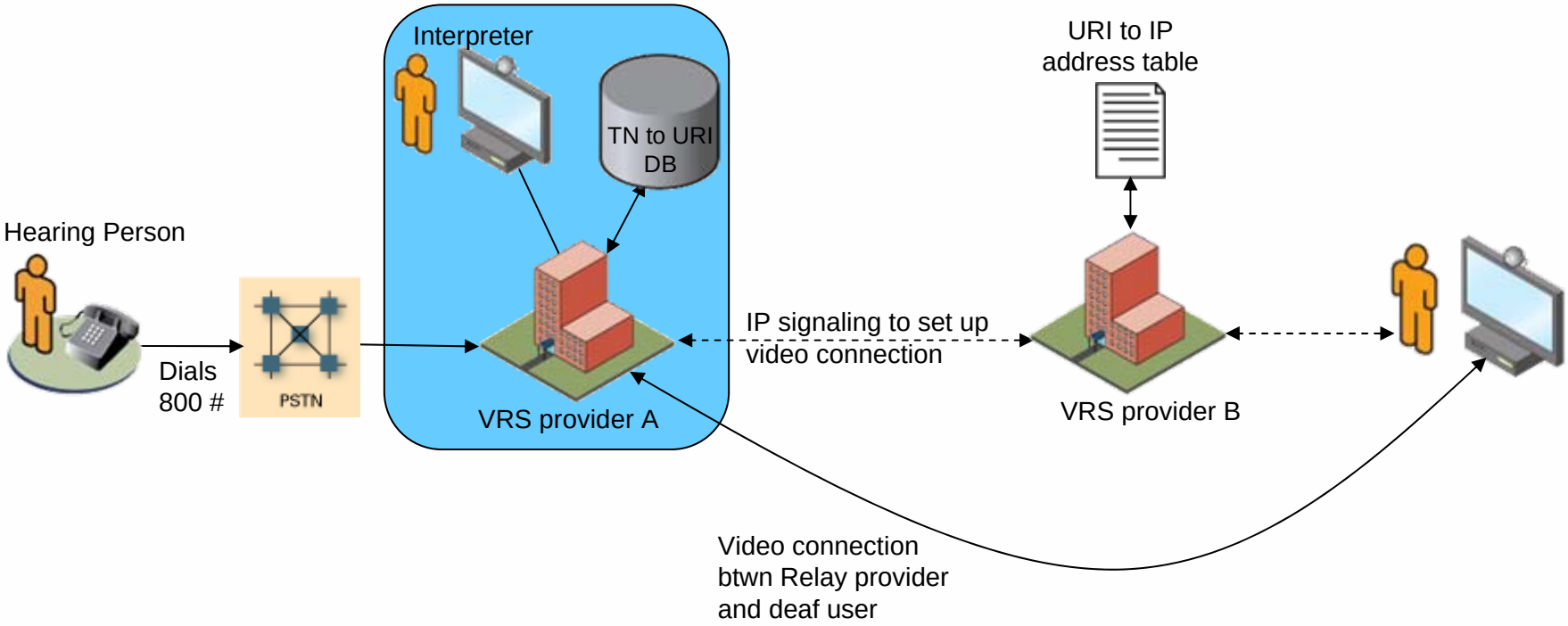
- The North American Numbering Plan Administrator (NANPA) provides blocks of TNs to the LEC
- The LEC will provide TNs to the VRS provider from their inventory
  - Analogous to method used today by resellers, mobile virtual network operators (MVNOs), and VoIP providers
- The VRS provider will assign a TN to their user from their inventory

Direct dialed calls – hearing person to deaf VRS users



- Direct dialed call from a hearing person to a deaf person will work as follows:
  1. The hearing person dials the TN
  2. The Telco Network routes the call to the LEC
  3. The LEC sends the call to the VRS provider
  4. The call is completed to the deaf user with an interpreter on the line

Dial around call – hearing person calls deaf person



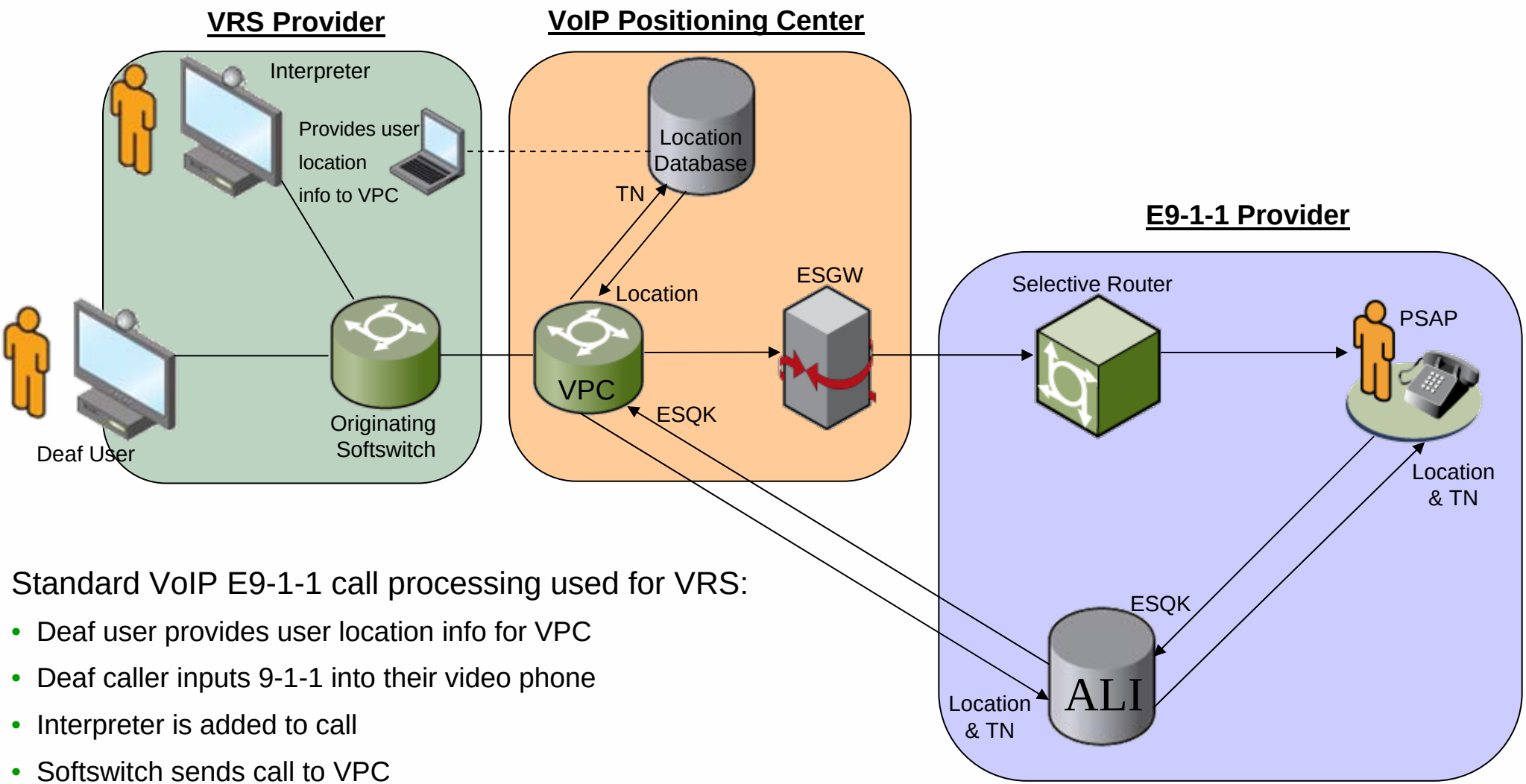
- The hearing person dials the 800# of their chosen VRS provider
- The hearing person provides the TN of the deaf person that they want to talk to
- The VRS switch queries a database (DB) that maps TNs to Internet addresses (URI) to complete the call to the deaf user
- A video connection is set up between the VRS provider and the deaf user
- Same technology enables deaf-to-deaf calling using TNs

E9-1-1 functionality for VRS users

- Implementing the E9-1-1 service requires:
  - The calling party must have a valid TN
  - The VRS provider must contract with a VoIP Positioning Center (VPC)
    - User's TN and location are provided to the VPC
    - VPCs provide location information to PSAPs
  - The VRS provider must contract with an Emergency Services Gateway provider (ESGW)
    - ESGWs provide a network to complete calls to PSAPs

- This solution:
  - Is based on the solution that wireless and VoIP providers use
  - Is an existing proven solution with existing proven providers
  - There are multiple competing VPC and ESGW providers

E9-1-1 call – deaf person to PSAP



Standard VoIP E9-1-1 call processing used for VRS:

- Deaf user provides user location info for VPC
- Deaf caller inputs 9-1-1 into their video phone
- Interpreter is added to call
- Softswitch sends call to VPC
- VPC, in conjunction with ESGW, routes the call to the correct PSAP
- VPC provides location of caller to PSAP

VRS Numbering Solutions – Existing solutions will be more efficient than developing new solutions

- Using existing capabilities and solutions to provide VRS users with TNs and E9-1-1 service will speed implementation and minimize costs
  - Existing solutions have proven processes and procedures
  - Leveraging existing processes, procedures, and systems that resellers, MVNOs, VoIP providers and others use to provide their customers with TNs and E9-1-1 service will keep costs down and promote functional equivalency
- VRS providers should contract with VPCs and ESGWs to provide E9-1-1 service to their deaf users
  - These services use proven systems and processes

VRS Numbering Solutions – Existing solutions will be more efficient than developing new solutions

- Using existing TN solutions will provide users with number portability between VRS providers

- Central database
  - Use of existing database will eliminate lengthy process and cost of developing new database only for VRS
  - NPAC is existing database with existing processes, procedures, interfaces, and service levels that could maintain TN to URI information for VRS
  - NPAC is under the oversight of the FCC
  - Telephone companies that would provide TNs to the VRS providers interface with the NPAC on a regular basis
  - Enables VRS users to easily port number to another VRS provider

Required Steps and Outstanding Issues

- FCC Order should address:
  - VRS providers to provide portable TNs that enable direct and dial around calling to deaf users
  - VRS providers to implement E9-1-1 service to deaf VRS users
  - A central database administered by a neutral third party
- Local Number Portability Administration (LNPA) Working Group of the North American Numbering Council
  - Created change order (415) to add SIP/H.323 URIs to the records in the NPAC for the purpose of supporting VRS
- Industry Numbering Committee
  - Considering TN and interoperability solutions for VRS

Telephone numbers and E9-1-1 for IP Relay

- Assignment of TNs could also apply to IP Relay providers
- The solutions described for VRS providers could be utilized to provide TNs and E9-1-1 service to IP Relay users in the same rapid, efficient and cost effective manner
- Providing TNs to IP Relay users allows direct dial and dial around capabilities for hearing people calling deaf people
- Implementing a registration process to get a TN for IP Relay users could help curb fraud